

Appln. No. 10/509,839
Response to Office Action dated March 13, 2006
Amendment dated July 11, 2006

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REMARKS

To expedite prosecution, Applicants have amended claim 9 to incorporate the subject matter of claim 11, directed to a preferred embodiment of the invention. Accordingly, no new matter has been introduced and the entry of the amendment is respectfully requested.

Applicants have cancelled claims 10-11. Accordingly, Applicants have also amended claims 14 and 15 to correct dependency to the pending claim 9. These amendments are clerical in light of the amendment to claim 9. Accordingly, no new matter has been introduced and the entry of the amendments is respectfully requested.

Applicants have amended claim 24 to correct the typographical error noted by the Examiner. This is a typographical amendment and thus no new matter has been introduced. Entry of the amendment is respectfully requested.

Turning now to the specific objections and rejections.

Claim 24 was objected to because of a typographical error. The amendment has obviated this rejection.

Claims 9-24 were rejected pursuant to 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,046,164 (Asano) in view of EP 0 267 015 (Finkenaur).

Applicants respectfully submit that this rejection should be withdrawn for the following reasons.

The improved ability of bFGF results in a better treatment of periodontal disease. This particular combination also results in an excellent viscosity of the preparation so that it can be applied to an area affected by periodontal disease uniformly and show excellent local retention. More specifically Applicants have shown that the claimed combination resulted in an unexpectedly good product. Finkenaur gives a list of a wide range of materials that can be used

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as thickeners including cellulose stabilizers, methyl cellulose, hydroxyethyl cellulose, carboxymethyl cellulose, hydroxypropyl methylcellulose and hydroxypropyl cellulose (page 3, lines 39-43). However, the specification does not disclose or suggest that the use of hydroxypropyl cellulose in combination with bFGF would have the superior property seen. Indeed, when one uses cellulose derivatives other than hydroxypropyl cellulose as claimed, such as methylcellulose and hydroxypropyl methylcellulose, which are described in Finkenaur as their preferred cellulose stabilizers, worst results were seen (see, Table beginning at page 3 of the attached Declaration). In the experiment described in the Declaration, sodium carboxymethyl cellulose (CMCNa) as opposed to the carboxymethyl cellulose (CMC) mentioned in Finkenaur was used. This is because the physical properties of CMC and CMCNa are different from each other. When water is added to CMC, it swells to become suspension. Thus, CMC cannot be used for preparing a viscous preparation of the present invention because a suspension is not viscous. However, when water is added to CMCNa, it becomes a viscous liquid. However, even when the CMCNa having a viscous property was used, no good result could be obtained as shown in the Table of the attached Declaration. Claim 9 now specifies that the thickener is hydroxypropyl cellulose. The attached declaration of Mr. Ohkuma establishes that the use of this thickener results in a method of treating periodontal disease that keeps bFGF surprisingly more stable than the use of other thickeners.

Additionally, the Examiner acknowledged that Asano did not teach viscous bFGF preparations. There is no suggestion in Asano that one should think about viscous compositions. The specification particularly points out that "the therapeutic agent... has an excellent effect" (col. 3, lines 56-60). Moreover, one example of Asano described a fibrin gel. In this example,

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fibrinogen forms a gel by formulating with thrombin to form a so called "fibrin paste." One then formulates aprotinin to the paste. This results in a solid, **not** a viscous mass.

The addition of the Finkenaure does not overcome the deficiency in Asano. Finkenaure discloses stabilizing/thickening compositions containing epidermal growth factor (EGF), and a method of using such compositions in treatment of diseases. The multiple products listed in Finkenaure do not include formulations for treatment of periodontal disease (p. 4, lines 27-31). The contemplated uses that Finkenaure describes include uses in ophthalmic formulations, breast milk, and creams and gauze dressings for wound healing. Accordingly, there is no discussion or suggestion in Finkenaure that would direct one skilled in the art to use the specific claimed combination for treatment of periodontal disease. Thus, there is no motivation to combine Finkenaure with Asano.

Accordingly, there is no suggestion of using hydroxypropyl cellulose as a thickener. Further, the effects of the enhanced stability when bFGF is used in combination with hydroxypropyl cellulose as a thickener is not suggested. Such an effect could be never expected from the description of lists of possible agents to combine a growth factor with, even if it is combined with Asano.

Thus, reading these references together would not have provided any reason to change the preparation from a non-fluid gel as taught by Asano into a specific hydroxypropyl cellulose with bFGF.

Accordingly, Applicants respectfully submit that the rejection of the claims 9-17 under 35 U.S.C. §103(b) should be withdrawn.

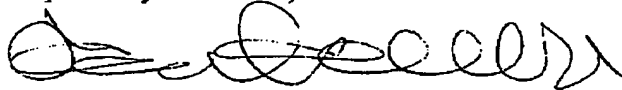
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In view of the foregoing, Applicants respectfully submit that all claims are in condition for allowance. At minimum, Applicants submit that the current amendments to the claims and the support provided in the Declaration under 37 CFR 1.132 will reduce issues on appeal. Early and favorable action is requested.

Fee deficiencies may be charged and overpayments credited to the NIXON PEABODY LLP
Deposit Account No. 19-2380.

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Respectfully submitted,



Ronald I. Eisenstein (30,628)
Leena H. Karttunen (L0207)
NIXON PEABODY LLP
100 Summer Street
Boston, MA 02110
(617) 345-6054